

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

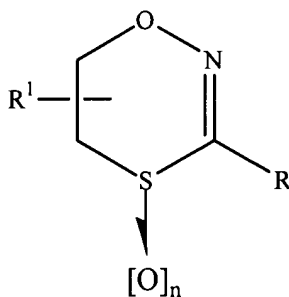
1. (currently amended) A preservative composition comprising, in synergistic proportions,

an oxathiazine compound plus a quaternary ammonium compound, or

an oxathiazine compound plus a triazole compound, or

both an oxathiazine compound, a quaternary ammonium compound and a triazole compound, wherein

(i) the oxathiazine compound is a compound of formula (I)



(I)

wherein n is 0, 1 or 2; R¹ is hydrogen, C₁-C₄ linear or branched alkyl, or benzyl; and

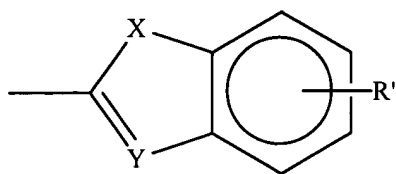
R is:

(a) phenyl; naphthyl; phenyl substituted with 1 to 3 of the following substituents: hydroxyl, halo, C₁-C₁₂ alkyl, C₅-C₆ cycloalkyl, trihalomethyl, phenyl, C₁-C₅ alkoxy, C₁-C₅ alkylthio, tetrahydropyranyloxy, phenoxy, (C₁-C₄ alkyl)carbonyl, phenylcarbonyl, C₁-C₄ alkylsulfinyl, C₁-C₄ alkylsulfonyl, carboxy or its alkali metal salt, (C₁-C₄ alkoxy)carbonyl, (C₁-C₄ alkyl)aminocarbonyl, phenylaminocarbonyl, tolylaminocarbonyl, morpholinocarbonyl, amino, nitro, cyano, dioxolanyl, or (C₁-C₄ alkoxy)iminomethyl; pyridinyl; thienyl, preferably when n is not 2; furanyl; or thienyl or furanyl substituted with 1 to 3 of the following groups:

alkyl, alkoxy, alkylthio, alkoxycarbonyl, halogen, trihalomethyl, cyano, acetyl, benzoyl, nitro, formyl, alkoxyaminomethyl, phenyl, or phenylaminocarbonyl, wherein the alkyl or alkoxy moiety is C₁-C₄, linear or branched;

or

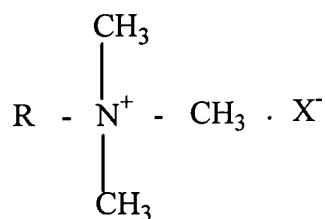
(b)



wherein X is oxygen or sulfur; Y is nitrogen, -CH-, or -C(C₁-C₄ alkoxy)-; and R'' is hydrogen or C₁-C₄ alkyl plus

(ii) the quaternary ammonium compound is selected from compounds of formula

(III):

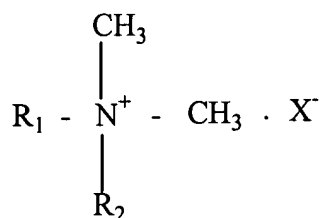


(III)

wherein R is an alkyl group having between 6 and 18 carbon atoms and X⁻ is an anion which allows ready water solubility of the quaternary ammonium salt,

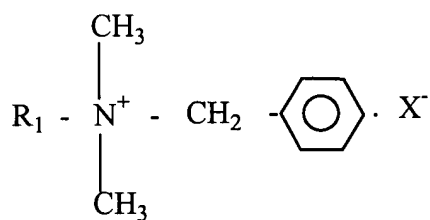
compounds of formula (IV):

(IV)

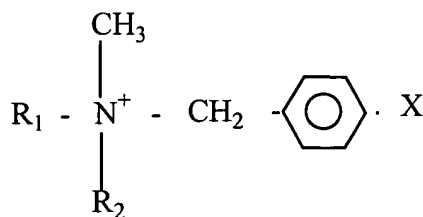


wherein R₁ and R₂ are alkyl groups which may be the same or different and which contain between 6 and 18 carbon atoms, and X⁻ is an anion as described above,

compounds of formulae (V) or (VI):



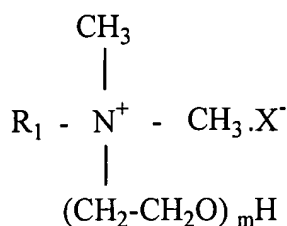
(V)



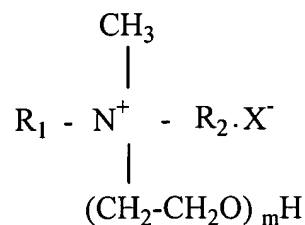
(VI)

wherein R₁ and R₂ are alkyl groups which can be the same or different and which contain between 6 and 18 carbon atoms and X⁻ is an anion as described above,

compounds of formulae (VII) or (VIII):



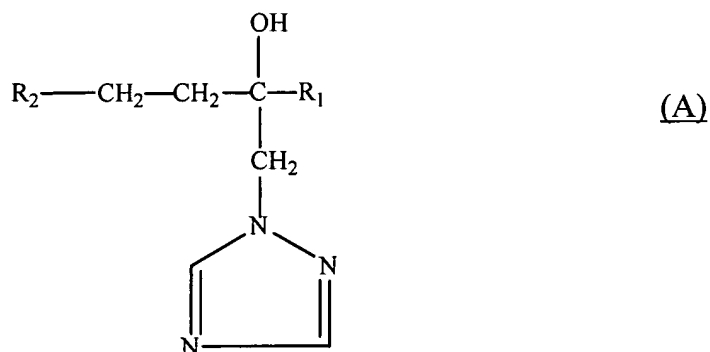
(VII)



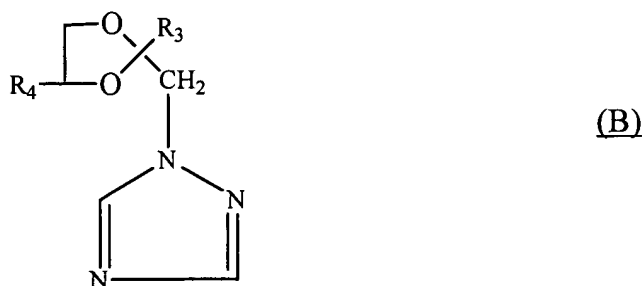
(VIII)

wherein R_1 and R_2 are alkyl groups which may be the same or different and which contain between 6 and 18 carbon atoms and wherein m is a number between 1 and 20 and

(iii) the triazole compound is selected from compounds of formula (A):



wherein R_1 represents a branched or straight chain C_{1-5} alkyl group and R_2 represents a phenyl group optionally substituted by one or more substituents selected from halogen atoms or C_{1-3} alkyl, C_{1-3} alkoxy, phenyl or nitro groups and compounds of formula (B):



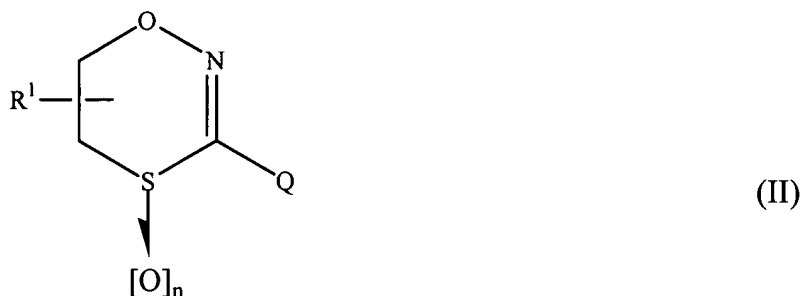
wherein R_3 is as defined for R_2 above and R_4 represents a hydrogen atom or a branched or straight chain C_{1-5} alkyl group, or

the triazole compound is selected from a group of compounds comprising cyproconazole, hexaconazole and difenaconazole.

2. (original) A composition as claimed in claim 1 which comprises an oxathiazine compound, a quaternary ammonium compound and a triazole compound.

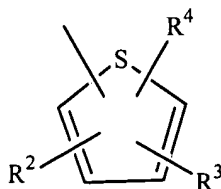
3. (cancelled)

4. (original) A composition as claimed in claim 3 wherein the oxathiazine compound is a compound of formula (II)



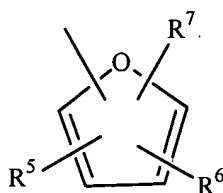
wherein n is 0, 1 or 2, R^1 is hydrogen, C_1 - C_4 linear or branched alkyl, or benzyl; and Q is:

(a)



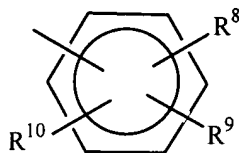
wherein R^2 , R^3 and R^4 are, individually, hydrogen, alkyl, alkoxy, alkylthio, alkoxycarbonyl, halogen, trihalomethyl, cyano, acetyl, formyl, benzoyl, nitro, alkoxyaminomethyl, phenyl, or phenylaminocarbonyl, wherein the alkyl or alkoxy moieties are all C_1 - C_4 , linear or branched, with the proviso that at least one of R^2 , R^3 or R^4 must be other than hydrogen;

(b)



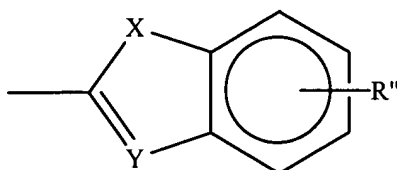
wherein R^5 , R^6 and R^7 are, individually, hydrogen, C_1 - C_4 alkoxy, C_1 - C_4 alkylthio, halogen, trihalomethyl, cyano, acetyl, formyl, benzoyl, nitro, phenyl, or phenylaminocarbonyl, with the proviso that at least one of R^5 , R^6 or R^7 must be other than hydrogen;

(c)



wherein R^8 , R^9 and R^{10} are, individually, hydroxyl, halo, C_1 - C_{12} alkyl, C_5 - C_6 cycloalkyl, trihalomethyl, phenyl, C_1 - C_5 alkoxy, C_1 - C_5 alkylthio, tetrahydropyranyloxy, phenoxy, (C_1 - C_4 alkyl)carbonyl, phenylcarbonyl, C_1 - C_4 alkylsulfinyl, C_1 - C_4 alkylsulfonyl, carboxy or its alkali metal salt, (C_1 - C_4 alkoxy)carbonyl, (C_1 - C_4 alkyl)aminocarbonyl, phenylaminocarbonyl, tolylaminocarbonyl, morpholinocarbonyl, amino, nitro, cyano, dioxolanyl, or (C_1 - C_4 alkoxy)iminomethyl; or

(d)



wherein X is oxygen or sulfur; Y is nitrogen, -CH-, or -C(C₁-C₄ alkoxy)-; and R'' is hydrogen or C₁-C₄ alkyl.

5. (original) A composition as claimed in claim 4 wherein the oxathiazine compound is selected from 3-(benzo[b]thien-2-yl)-5,6-dihydro-1,4,2-oxathiazine 4-oxide and 5,6-dihydro-3-(2-thienyl)-1,4,2-oxathiazine, 4-oxide.

6. (cancelled)

7. (currently amended) A composition as claimed in claim 16 wherein the triazole compound is selected from the group comprising tebuconazole, propiconazole, azaconazole, ~~hexaconazole~~, ~~difenaconazole~~, ~~cyproconazole~~, bromuconazole, epoxiconazole, metconazole, triticonazole, fenbuconazole, flusilazole, tetraconazole and penconazole.

8. (cancelled)

9. (previously presented) A method of treating a substrate of wood or other material which comprises applying to the substrate a composition as claimed in claim 1.

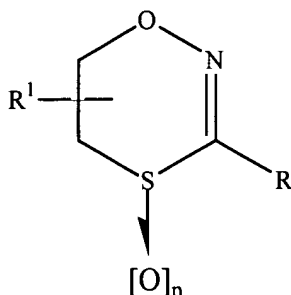
10. (original) A method as claimed in claim 9 wherein the substrate is affected by or at risk of being affected by soft rot.

11. (original) A method as claimed in claim 9 wherein the substrate is affected by or at risk of being affected by *Ascomycotina* or *Deuteromycotina*.

12. (previously presented) A method of preserving wood or other material which comprises applying to the wood or other material a composition as claimed in claim 1.

13. (currently amended) A method of enhancing the activity of an oxathiazine against fungi which comprises applying to wood or other material an oxathiazine plus a quaternary ammonium compound or a triazole compound, or both, wherein

(i) the oxathiazine compound is a compound of formula (I)



(I)

wherein n is 0, 1 or 2; R¹ is hydrogen, C₁-C₄ linear or branched alkyl, or benzyl; and

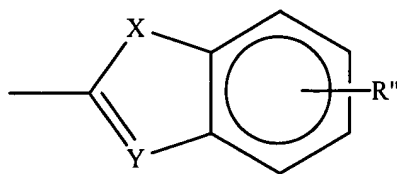
R is:

(a) phenyl; naphthyl; phenyl substituted with 1 to 3 of the following substituents: hydroxyl, halo, C₁-C₁₂ alkyl, C₅-C₆ cycloalkyl, trihalomethyl, phenyl, C₁-C₅ alkoxy, C₁-C₅ alkylthio, tetrahydropyranyloxy, phenoxy, (C₁-C₄ alkyl)carbonyl, phenylcarbonyl, C₁-C₄ alkylsulfinyl, C₁-C₄ alkylsulfonyl, carboxy or its alkali metal salt, (C₁-C₄ alkoxy)carbonyl, (C₁-C₄ alkyl)aminocarbonyl, phenylaminocarbonyl, tolylaminocarbonyl, morpholinocarbonyl, amino, nitro, cyano, dioxolanyl, or (C₁-C₄ alkoxy)iminomethyl; pyridinyl; thienyl, preferably when n is not 2; furanyl; or thienyl or furanyl substituted with 1 to 3 of the following groups:

alkyl, alkoxy, alkylthio, alkoxycarbonyl, halogen, trihalomethyl, cyano, acetyl, benzoyl, nitro, formyl, alkoxyaminomethyl, phenyl, or phenylaminocarbonyl, wherein the alkyl or alkoxy moiety is C₁-C₄, linear or branched;

or

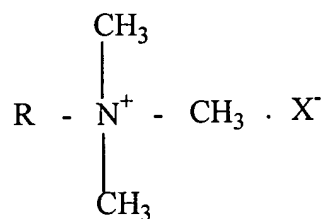
(b)



wherein X is oxygen or sulfur; Y is nitrogen, -CH-, or -C(C₁-C₄ alkoxy)-; and R'' is hydrogen or C₁-C₄ alkyl plus

(ii) the quaternary ammonium compound is selected from compounds of formula

(III):

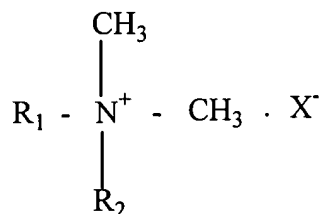


(III)

wherein R is an alkyl group having between 6 and 18 carbon atoms and X⁻ is an anion which allows ready water solubility of the quaternary ammonium salt,

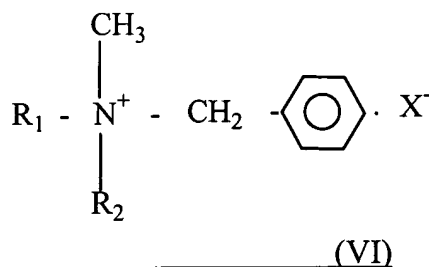
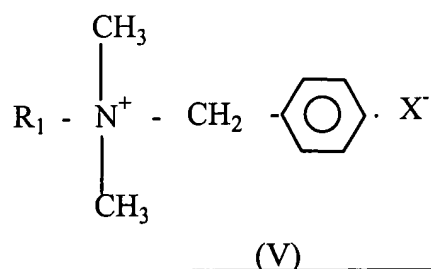
compounds of formula (IV):

(IV)



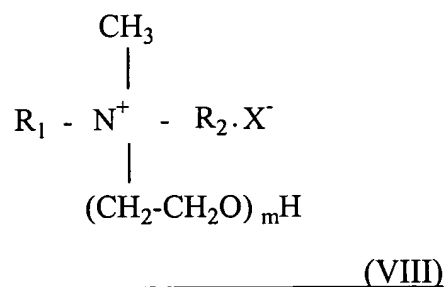
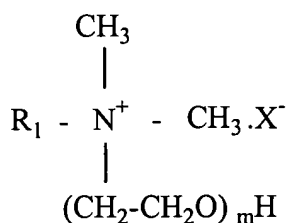
wherein R_1 and R_2 are alkyl groups which may be the same or different and which contain between 6 and 18 carbon atoms, and X^- is an anion as described above,

compounds of formulae (V) or (VI):



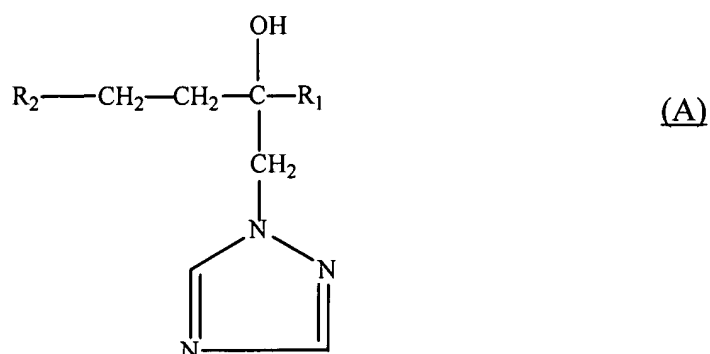
wherein R_1 and R_2 are alkyl groups which can be the same or different and which contain between 6 and 18 carbon atoms and X^- is an anion as described above,

compounds of formulae (VII) or (VIII):

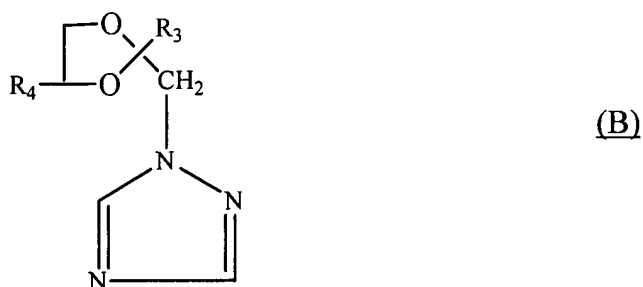


wherein R_1 and R_2 are alkyl groups which may be the same or different and which contain between 6 and 18 carbon atoms and wherein m is a number between 1 and 20 and

(iii) the triazole compound is selected from compounds of formula (A):



wherein R_1 represents a branched or straight chain C_{1-5} alkyl group and R_2 represents a phenyl group optionally substituted by one or more substituents selected from halogen atoms or C_{1-3} alkyl, C_{1-3} alkoxy, phenyl or nitro groups and compounds of formula (B):



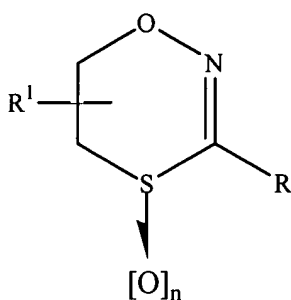
wherein R_3 is as defined for R_2 above and R_4 represents a hydrogen atom or a branched or straight chain C_{1-5} alkyl group, or

the triazole compound is selected from a group of compounds comprising cyproconazole, hexaconazole and difenaconazole.

14. (previously presented) A substrate made of wood or other material treated with a preservative composition as claimed in claim 1.

15. (currently amended) A substrate of wood or other material comprising in synergistic proportions, an oxathiazine compound plus a quaternary ammonium compound or a triazole compound, or both wherein

(i) the oxathiazine compound is a compound of formula (I)



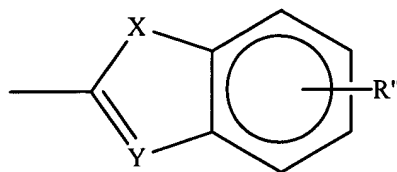
(I)

wherein n is 0, 1 or 2; R¹ is hydrogen, C₁-C₄ linear or branched alkyl, or benzyl; and R is:

(a) phenyl; naphthyl; phenyl substituted with 1 to 3 of the following substituents: hydroxyl, halo, C₁-C₁₂ alkyl, C₅-C₆ cycloalkyl, trihalomethyl, phenyl, C₁-C₅ alkoxy, C₁-C₅ alkylthio, tetrahydropyranyloxy, phenoxy, (C₁-C₄ alkyl)carbonyl, phenylcarbonyl, C₁-C₄ alkylsulfinyl, C₁-C₄ alkylsulfonyl, carboxy or its alkali metal salt, (C₁-C₄ alkoxy)carbonyl, (C₁-C₄ alkyl)aminocarbonyl, phenylaminocarbonyl, tolylaminocarbonyl, morpholinocarbonyl, amino, nitro, cyano, dioxolanyl, or (C₁-C₄ alkoxy)iminomethyl; pyridinyl; thienyl, preferably when n is not 2; furanyl; or thienyl or furanyl substituted with 1 to 3 of the following groups: alkyl, alkoxy, alkylthio, alkoxycarbonyl, halogen, trihalomethyl, cyano, acetyl, benzoyl, nitro, formyl, alkoxyaminomethyl, phenyl, or phenylaminocarbonyl, wherein the alkyl or alkoxy moiety is C₁-C₄, linear or branched;

or

(b)



wherein X is oxygen or sulfur; Y is nitrogen, -CH-, or -C(C₁-C₄ alkoxy)-; and R'' is hydrogen or C₁-C₄ alkyl plus

(ii) the quaternary ammonium compound is selected from compounds of formula
(III):



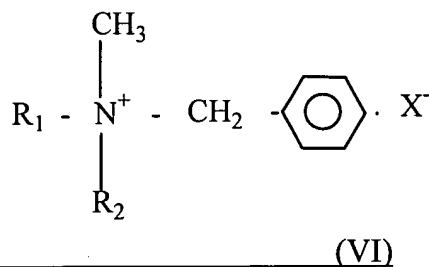
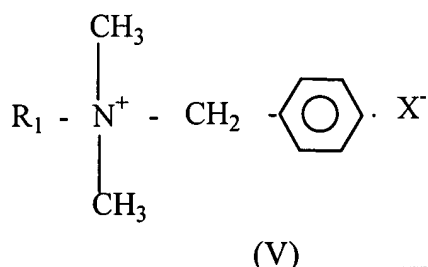
wherein R is an alkyl group having between 6 and 18 carbon atoms and X⁻ is an anion which allows ready water solubility of the quaternary ammonium salt,

compounds of formula (IV):



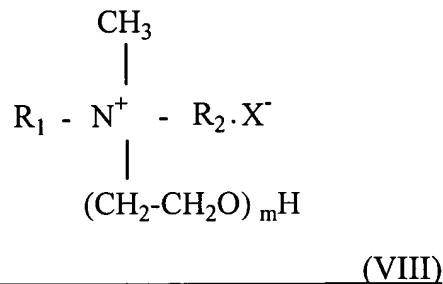
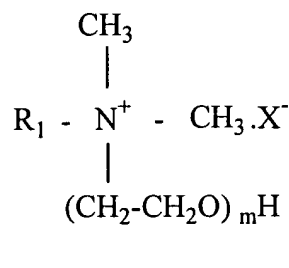
wherein R₁ and R₂ are alkyl groups which may be the same or different and which contain between 6 and 18 carbon atoms, and X⁻ is an anion as described above,

compounds of formulae (V) or (VI):



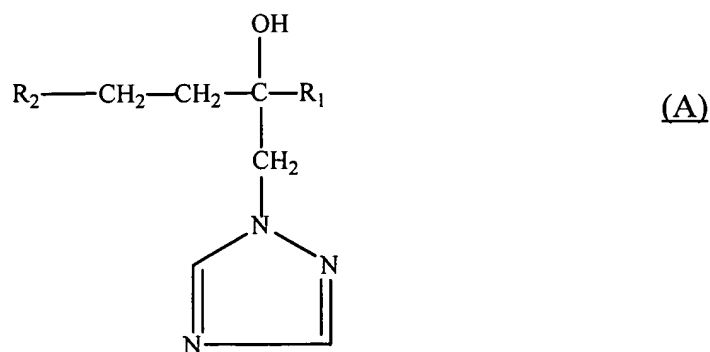
wherein R₁ and R₂ are alkyl groups which can be the same or different and which contain between 6 and 18 carbon atoms and X⁻ is an anion as described above,

compounds of formulae (VII) or (VIII):

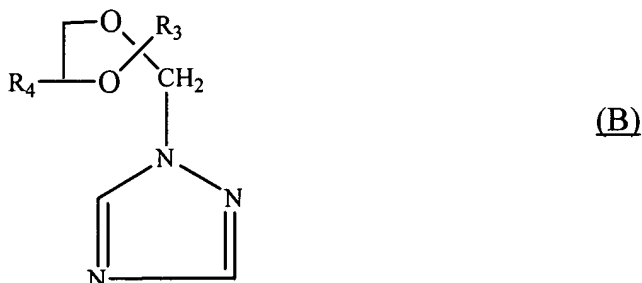


wherein R₁ and R₂ are alkyl groups which may be the same or different and which contain between 6 and 18 carbon atoms and wherein m is a number between 1 and 20 and

(iii) the triazole compound is selected from compounds of formula (A):



wherein R₁ represents a branched or straight chain C₁₋₅ alkyl group and R₂ represents a phenyl group optionally substituted by one or more substituents selected from halogen atoms or C₁₋₃ alkyl, C₁₋₃ alkoxy, phenyl or nitro groups and compounds of formula (B):



wherein R₃ is as defined for R₂ above and R₄ represents a hydrogen atom or a branched or straight chain C₁₋₅ alkyl group, or

the triazole compound is selected from a group of compounds comprising cyproconazole, hexaconazole and difenaconazole.

16. (new) A composition as claimed in claim 1, comprising an oxathiazine compound and a quaternary ammonium compound, wherein the ratio of oxathiazine compound to quaternary ammonium compound is from about 2:1 to about 1:50.

17. (new) A composition as claimed in claim 1, comprising an oxathiazine compound plus a triazole compound, wherein the ratio of oxathiazine compound to triazole compound is from about 50:1 to about 1:2.